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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,284	10/15/2001	Eliel Louzoun	P-3945-US	1099

27130 7590 04/26/2004

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EXAMINER

MASON, DONNA K

ART UNIT PAPER NUMBER

2111

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,284

Applicant(s)

LOUZOUN ET AL.

Examiner

Donna K. Mason

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 7-9, 12-15, 17-22, 24-33, 36-44, 48, 50, 52, and 53 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,526,462 to Elabd.

With regard to claims 1-4, 7-9, 12-15, 17-22, 24-33, 36-44, 48, 50, 52, and 53, Elabd discloses a system including: at least two CPUs embedded on a chip (Fig. 2, item 4; Fig. 5B, items M1-M6; and column 1, lines 60-66) able to communicate with each other and to asynchronously control reading and writing of data to and from memory on said chip (Fig. 2, item 34; Fig. 5B, items MEM1-MEM6; column 6, lines 24-67 to column 7, lines 1-29). Elabd also discloses at least one first-in-first-out (FIFO) unit (Fig. 2, item 32), a control unit to control the transfer of data (Fig. 2, item 30; column 5, lines 39-50), and a system where the memory is RAM (Fig. 2, item 34). (Also, see *generally* Figs. 2, 5B, and 10, and the accompanying text).

Therefore, Elabd reads on the invention as claimed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4, 7, 9, 12, 13, 42, 44, 45, 48, 49, 52, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,590,308 to Shih in view of Elabd.

With regard to claims 1, 4, 7, 9, 12, 13, and 48, Shih discloses at least two processing units (Fig. 1, items 42, 44, and 46) able to communicate with each other and to generally independently control access to data from memory (Fig. 1, item 20). Shih also discloses a data flow control unit able to control data transfer (column 4, lines 58-67 to column 5, lines 1-12), and a system where the processing units are central processing units (CPUs) (column 4, lines 58-60),

With regard to claim 49, Shih discloses a system including a register accessible by the first and second CPUs (column 5, lines 23-27).

With regard to claims 42, 44, 45, 52 and 53, Shih further discloses instructions for at least two CPUs to asynchronously control reading and writing of data to and from memory (column 1, lines 13-15 and column 5, lines 34-67 to column 6, lines 1-19), and instructions for at least two processing units to generally independently control access to data from memory (column 5, lines 34-67 to column 6, lines 1-19).

With regard to claims 44 and 45, Shih discloses at least one control unit (column 4, lines 58-67 to column 5, lines 1-13) and a register accessible by the first and second CPUs (column 5, lines 23-27).

Shih does not expressly disclose the at least two embedded processing units and memory a chip, as claimed.

Elabd discloses embedded processors and memory on a chip (column 1, lines 22-35). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the embedded processors and memory on a chip of Elabd with Shih. The suggestion or motivation for doing so would have been to reduce the overall size of the end product, to provide faster chip speeds, and to reduce costs (column 1, lines 35-59).

Therefore, it would have been obvious to combine Elabd with Shih to obtain the invention as specified in claims 1, 4, 7, 9, 12, 13, 42, 44, 45, 48, 49, 52, and 53.

5. Claims 1, 2, 4, 5, 7, 8, 10, 28, 30, 35, 42, 43, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,317,726 to Horst in view of Elabd.

With regard to claims 1, 2, 4, 5, 7, 8, 10, 28, 30, 35, 42, 43, and 47, Horst discloses a system including: at least two processing units (Fig. 1, items 11, 12, and 13) able to communicate with each other and to generally independently control access to data from memory (Fig. 1, items 14, 15, and 16), at least one first in first out (FIFO) unit used by said processing units to transfer data therebetween (column 2, lines 31-35), a

system where the processing units are central processing units (CPUs) (Fig. 1, items 11, 12, and 13), and at least two asynchronous clocks controlling said at least two processing units (Fig. 1, items 17). (Also, see *generally*, column 2, lines 12-43).

Horst does not expressly disclose the at least two embedded processing units and memory a chip, as claimed.

Elabd discloses embedded processors and memory on a chip (column 1, lines 22-35). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the embedded processors and memory on a chip of Elabd with Horst. The suggestion or motivation for doing so would have been to reduce the overall size of the end product, to provide faster chip speeds, and to reduce costs (column 1, lines 35-59).

Therefore, it would have been obvious to combine Elabd with Horst to obtain the invention as specified in claims 1, 2, 4, 5, 7, 8, 10, 28, 30, 35, 42, 43, and 47.

6. Claims 6, 11, 16, 46, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shih in view of Elabd as applied to claims 1, 7, 12, 42, and 48 above, and further in view of U.S. Patent Application Publication No. 2003/0009629 to Gruner, et al. ("Gruner").

As discussed above with regard to the 35 U.S.C. 103(a) rejection of independent claims 1, 7, 12, 42, and 48, Shih in view of Elabd discloses all the features of those claims. Shih in view of Elabd not expressly disclose a system where one of the processing units is able to process media access control (MAC) commands and another

of the processing units is able to process physical layer device (PHY) commands of a networking protocol.

Gruner discloses a system where one of the processing units is able to process media access control (MAC) commands and another of the processing units is able to process physical layer device (PHY) commands of a networking protocol. (See *generally*, Fig. 4, items 60, 116, 120, 124, and 82; Fig. 9C, items 160 and 170; and paragraphs [0238] and [0269]).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Gruner with Shih in view of Elabd. The suggestion or motivation for doing so would have been to provide parallel processing and networking capabilities (see paragraph [0030]).

Therefore, it would have been obvious to combine Gruner with Shih in view of Elabd to obtain the invention as specified in claims 6, 11, 16, 46, and 51.

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elabd in view of Gruner.

As discussed above with regard to the 35 U.S.C. 102(e) rejection of independent claim 17, Elabd discloses all the features of claim 17. Elabd does not expressly disclose an apparatus where the first CPU is able to process MAC commands and the second CPU is able to process PHY commands of a networking protocol. Gruner discloses an apparatus where the first CPU is able to process MAC commands and the second CPU is able to process PHY commands of a networking protocol.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Gruner with Elabd. The suggestion or motivation for doing so would have been to provide parallel processing and networking capabilities (see paragraph [0030]).

Therefore, it would have been obvious to combine Gruner with Elabd to obtain the invention as specified in claim 23.

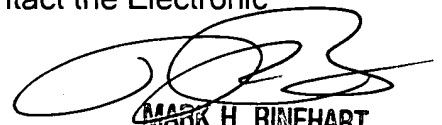
Conclusion

8. A shortened statutory period for reply is set to expire THREE MONTHS from the mailing date of this communication. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donna K. Mason whose telephone number is (703) 305-1887. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on (703) 305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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